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MAR 13 1939

SOIL CONSERVATION SERVICE NEWS

REGION 4

COMPRISING STATES OF LOUISIANA, ARKANSAS,
AND TEXAS, EXCEPT HIGH PLAINS AREA

REGIONAL OFFICE--FORT WORTH, TEXAS

VOL. V

FEBRUARY 1939

NO. 2

NEW DISTRICT ADDED IN LOUISIANA

Supervisors Elected in Six of the Original Districts

Farmers late last month voted to establish the Dugdemonia State Soil Conservation District in Louisiana -- a district covering 1,212,504 acres in Lincoln, Bienville, Jackson, Winn, LaSalle, and Caldwell parishes. The vote was 1,023 "for" and 30 "against" creation of the new district.

The Dugdemonia district is the eighth to be established in Louisiana. Dean J. G. Lee, Louisiana State University, chairman of the state soil conservation committee, announced that landowners have elected supervisors for six of the seven original districts. The elected members, three to a district, serve with two already appointed by members of the state committee.

Supervisors recently elected are:

Felician District: George L. Gayden, Gurley; Larance Mahoney, Pride; R. E. Watson, Greensburg.

Dorcheat District: Archie Hearne, Shangaloo; J. E. Burnetto, Hayesville; S. S. Vickers, Haughton.

D'Arbonne District: Ellis T. Powell, Marion; S. O. Henry, Calhoun; R. J. McAdams, Lisbon.

Saline District: John O. Williams, Goldonna; Leon D. Salter, Coushatta; E. W. Sutton, Gibsland.

Upper Sabine District: J. E. Heard, Converse; L. H. Cook, Grand Cane; O. E. Price, Logansport.

Upper West Red River District: E. A. Laffitte, Mansfield; Claude M. Davidson, Keithville; M. E. Winn, Robeline.

Three farmers to serve on the board of supervisors for the Pearl River District will be elected on February 18.

It also was announced that landowners will go to the polls in March and April to vote in referenda called to determine if a majority desire the creation of four other districts.

Next month referenda will be conducted in the proposed Lower West Red River District covering 800,000 acres in Natchitoches and Rapides parishes, and in the proposed Grand Coteau District covering 267,082 acres in Evangeline, St. Landry, Lafayette and St. Martin parishes.

April 8 has been set as the date for referenda in the proposed Lower East Red River District, covering 1,300,000 acres in Winn, Grant, Rapides, LaSalle, and Catahoula parishes, and the proposed Calcasieu District, covering 1,500,000 acres in Vernon, Allan and Beauregard parishes.

The eight districts already voted in Louisiana cover approximately 8,000,000 acres and the four proposed districts ready for referenda cover about 3,867,000 acres.

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NATIONAL PROGRESS IN DISTRICTS LISTED

As of January 15, 1939, certificates of organization had been issued to 119 soil conservation districts in 24 states. The area covered by these districts totals 63,867,960 acres. A twenty-fifth state, Indiana, had not yet completed organization of a district. The Service has entered into memoranda of understanding with 63 of these districts.

Distribution of districts by states: Arkansas 12, Colorado 3, Florida 1, Georgia 10, Illinois 1, Kansas 1, Louisiana 7, Maryland 1, Michigan 2, Minnesota 1, Mississippi 6, Nebraska 2, Nevada 7, New Jersey 3, New Mexico 4, North Carolina 6, North Dakota 5, Oklahoma 24, Pennsylvania 4, South Carolina 4, South Dakota 5, Utah 7, Virginia 1, Wisconsin 2.

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INCREASED YIELDS FOLLOW INSTALLATION OF CONSERVATION PRACTICES

The use of contour cultivation, strip crops, and level closed-end terraces on 38 acres of cotton land paid H. B. Atkins of Vernon a profit of \$222.72 on the 1938 crop. This figure represents the extra money Mr. Atkins obtained from the increased yield of cotton.

In the fall and winter of 1937 when Mr. Atkins terraced 24 of the 38 acres and decided on the use of contour rows and strip crops as protection for the remaining 14 acres, he determined to make an accurate yield check and learn what the increase would be over the yield from nearby untreated land.

The 38 acres were located on Miles fine sandy loam with some Abilene silt loam. The slope varied from less than 1% to 3%. About four acres had less than 1% slope and about 12 acres had 3% slope. The remaining acres sloped 1.5% to 2%.

Twenty-four acres, on 2% and 3% slopes, were terraced in the fall and winter of 1937 before the 1938 spring rainy season. The entire 38-acre field was contour tilled and strip cropped.

Mr. Atkins rented land adjoining his farm and planted 9 acres of cotton in straight rows, but applied no conservation measures. The slope of this land varied from less than 1% to 3.5%. About five acres had less than 1% slope, two acres had 3.5% slope, and the remaining two acres sloped 1.5% to 2%. The entire 9 acres was Miles sandy loam.

Yield from the 38 acres of conservation-treated land was 6,609 pounds, an average of 172 pounds of lint to the acre. Yield from the untreated land was 954 pounds, an average of 104 pounds of lint to the acre.

In determining the value of conservation practices in terms of increased income from the land, lint cotton was valued at 8¢ a pound and seed at \$24 a ton.

The gross per-acre income from cotton produced on the conservation-treated land was \$7.67 more than that realized from the yield on the untreated land. The net per-acre income from the protected land was \$5.80 more than that from the unprotected land, after cost of picking and ginning had been deducted.

It was estimated that the cost of building the terraces on the Atkins farm was about \$100. Thus it is seen that Mr. Atkins paid for his terraces and had \$122 left from one year's increased crop production.

Conservation practices also proved of value to Mr. Atkins in cutting the cost of planting his cotton. He reported that he was forced to plant his cotton five times on the rented land because water ran down the straight rows and packed the soil. Only 12 acres on the 38-acre tract were planted twice; The rest was planted only once. Mr. Atkins also said he was able to work the conservation-treated land much sooner after rains. Water concentrated in low places on the 9-acre unprotected field and made it necessary for him to wait until the water had evaporated or slowly penetrated into the soil before he could get into the field.

Mr. Atkins attributed much of this increased yield to the fact that his contour rows, strip crops, and terraces caught and held the early spring rains. This water was stored in the ground for the use of crops during the dry summer months. An official rain gauge set up by technicians from the Vernon project was located a mile and a half from the Atkins farm. It recorded a total of 21.85 inches of rainfall during 1938.

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PASTURE LISTING INCREASES GRASS YIELDS

Livestock grazed three times as much forage from a listed area on the ranch of D. T. Jones & Sons near Grape Creek in Tom Green County, Texas, as they did from an adjoining, untreated area during a 3-month period, R. M. Milhollin, area conservationist for the Service, reports. The value of listing and contour ridging to conserve water and increase grass growth was studied on the test plots on the ranch.

Livestock grazed 455 pounds of forage per acre from the contour-listed area; 327 pounds per acre from a contour-ridged area; 390 pounds from an area which had been supplied with extra water by diversion from an area not provided with any soil or moisture conserving devices, and 152 pounds from an area with no treatment.

The forage yield figures were obtained by staking out two separate plots on each of the treated and untreated areas. One of the plots was grazed while the adjacent plot was protected from grazing. Grass was clipped by hand from both the protected and unprotected plots, the difference between the grass yields representing the amount consumed by stock on the unprotected plot. Vegetation clipped was air dried and weighed to determine the per-acre forage yield.

Two forage yield studies were made on the Jones ranch between April 1 and October 1, 1938; the total yield being 818 pounds per acre from a contour-listed pasture, 892 pounds per acre from a contour-ridged pasture, 712 pounds from an area supplied with water over and above the rain which fell on the land, and 530 pounds per acre from an untreated area.

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SEVEN NEW WATER FACILITIES PROJECTS APPROVED FOR PLANNING

The Department of Agriculture's Water Facilities program will be made available to an additional number of West and Southwest Texas farmers in 28 counties through the selection of seven new project areas for the development of water facilities on approximately 6,000,000 acres of farm and ranch land, according to Louis P. Merrill, Fort Worth, regional conservator for the Soil Conservation Service.

Mr. Merrill was notified from Washington on January 30 that Secretary of Agriculture Henry A. Wallace had approved the seven new projects for planning. The number of water facilities projects in Texas will be increased to 12 when development work is started in the seven new areas.

The new projects approved for planning are:

Toyah Creek Watershed: Approximately 630,000 acres located in Reeves, Pecos and Jeff Davis counties.

Atascosa River Watershed: About 1,086,000 acres lying in Atascosa, Frio, Medina, Bexar, Wilson, Karnes and Live Oak counties.

Elm Creek Watershed: 1,073,000 acres in Maverick, Kinney, Uvalde and Zavala counties.

Spring and Dove Creeks and the South Concho Watershed: 900,000 acres in Irion, Tom Green, Crockett and Schleicher counties.

Brady Creek Watershed and Mustang, Salt, Elm, Cow, Cedar, and Corn Creek Watersheds: 900,000 acres in Concho, McCulloch, Menard and San Saba counties.

Big Elm, Mulberry, Noodle, Bitter, Dead Man's and Cedar Creek Watersheds: 860,000 acres in Taylor, Jones, Shackelford and Callahan counties.

Dockum, Duck and Croton Watersheds: 640,000 acres in Dickens and Kent counties.

Under the authority granted in the Pope-Jones Water Facilities Act, farmers and ranchers in these areas will receive Federal assistance in installing facilities to build up supplies of water for range and cropland improvement and for livestock use.

Types of work contemplated under the water facilities program include the construction, installation and development of ponds, spreaders, reservoirs, wells, dams, springs, pumping works, windmills, stock water tanks, flood irrigation and small irrigation systems for single farms or groups of farms.

Projects already in operation in Texas are:

Champion Creek and Lone Wolf Draw Watersheds in Mitchell, Nolan and Scurry counties.

California Creek Watershed in Fisher, Jones, Stonewall and Haskell counties.

Mustang and Seminole Draws Watershed in Martin, Midland, Ector, Howard, Gaines, Upton, Andrews, Dawson, Yoakum and Glasscock counties.

Rita Blanca and Major Long's Crocks Watershed in Dallam and Hartley counties.

Coldwater-Palo Duro Watershed in the counties of Dallam, Hartley, Shorman, Moore, Mansford, Hutchinson and Ochiltree.

The water facilities program for Texas farmers is a cooperative enterprise being carried on jointly by the Bureau of Agricultural Economics, the Farm Security Administration and the Soil Conservation Service. The Texas Planning Board, the State Board of Water Engineers and the Texas Agricultural Extension Service assisted representatives of the Federal agencies in selecting locations for water facilities projects.

TREES, EROSION CONTROL, AND FARM INCOME

By Homer C. Mitchell, Head
Woodland Management Section
Region 4

Homer Northum, who has an agreement with the supervisors of the Mine Creek Soil Conservation District providing for a complete erosion control program on his farm near Nashville, Arkansas, is glad to extend complete fire and grazing protection to his 55.5 acres of woodland because it affords erosion control and insures continuance of a satisfactory income.

Mr. Northum will start immediately to apply the woodland management plan he has developed with the assistance of the Soil Conservation Service forester assigned to the district. He has accepted an offer of \$9 per thousand feet, Doyle scale, for logs loaded on the buyer's trucks. No trees less than 18 inches in diameter will be sold. At this price, the present annual growth is worth \$250, of which about \$180 is net and \$70 is wages earned by Mr. Northum and his helpers during spare time from other farm work. The plan is to cut approximately equal amounts of timber each year, depending upon market conditions, of course, so that the income from the woodland will be regular.

Mr. Northum has utilized inferior trees for home use in the past, so he now has a high percentage of "crop" trees. Yearly growth over the entire woods averages 493 feet per acre, log scale. On two-thirds of the area which is overstocked, the growth averages 550 feet, while on one-third which is understocked the growth averages about 400 feet per acre. With adjustments in stocking which will be made as a result of the forester's recommendations and continued use of inferior trees for farm purposes, the production of salable material will gradually increase.

As the plan has worked out, everyone is satisfied. Mr. Northum gets a nice annual income from his woodland. His help get a chance to earn extra wages. The mill man gets choice, selectively-cut logs. The neighbors down the creek get flood-hazard reduction. And the district supervisors feel sure they will not be concerned about soil erosion in Mr. Northum's woods.

ONE ARKANSAS DISTRICT TO BE ENLARGED

Area of the Greene County--Crowley Ridge State Soil Conservation District will be increased by approximately 133,000 acres as a result of a referendum held last month by which farmers of the Crowley Ridge section of Clay County voted overwhelmingly in favor of annexing their section of the county to the Greene County district. The voting was 291 "for" and 11 "against" annexation.

The present area of the Greene County--Crowley Ridge district covers approximately 184,300 acres, all in Greene County. The annexation will increase its size to about 317,300 acres.

As of February first, 1,091 farmers who own or operate 138,600 acres of land in the 10 operating Arkansas soil conservation districts had entered into cooperative agreements with their respective boards of supervisors and were establishing complete and coordinated soil and water conservation systems on their land.

Supervisors reported that individual farm plans for 115 other farms covering 11,970 acres had been completed and that farm plans were nearing completion on an additional 148 farms embracing a land area of 25,103 acres.

Conservation surveys had been completed on 1,259,008 acres of land in the 10 districts as of February 1.

Supervisors also reported that 3,125 farmers had filed applications with their boards of supervisors asking assistance in installing erosion control practices on their farms.

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SOIL CONSERVATION COURSE AT BARTLETT CAMP

One hundred and seventy-four CCC enrollees, 87 per cent of the total enrollee strength of the camp, have registered for a soil conservation course being offered by the technical service staff in cooperation with the educational adviser.

The course is divided into four classes: Erosion and Its Effects; Agronomy; Farm Management, and Engineering. Eight members of the technical staff are serving as instructors. An enrollee may complete one of the four classes in a three-month period, or all four in a year.

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EROSION AND ITS EFFECT ON FRUIT YIELDS

The following report, "Water Erosion Cuts Michigan Fruit Yields", was compiled by Lee N. Rosencrans, project technician for the Soil Conservation Service at Benton Harbor, Michigan, and was issued by the regional office of the Service at Dayton, Ohio. Reference is made to Region 3 circulars 29 and 125.

When erosion goes up, fruit yields come down.

This observation is appropriate following investigational work done by the Benton Harbor, Mich., project during 1936, 1937, and 1938.

With the soil scientist furnishing soil, slope, and erosion data, records were made of yields on a peach orchard. These results should be interesting to the fruit grower because of the correlation that seems to exist between erosion and reduced yields.

On one farm having soils chiefly of the Hillsdale series complex, Elberta peach yields over a three-year period, varied from 2.7 to 6.14 bushels per tree. On "A" slopes, with less than 25 per cent surface erosion, the highest yields were obtained. On steep slopes, "D", with 75 to 100 per cent surface erosion, the yield was 56 per cent less over a three-year period.

Here is the entire story in figures for the three-year period:

Summary 1936-1937-1938

| Class Slope | Percentage Slope | Percentage Surface Erosion | Yield Bushels Per Tree | Percentage Decrease | Loss per Tree (@ \$1.31 Bu.) |
|----------------|---------------------|----------------------------------|------------------------------|------------------------|---------------------------------|
| ----- | | | | | |
| A | 0-3 | -25 | 6.14 | | |
| B | 3-7 | 25-50 | 5.06 | 18 | 1.41 |
| BB | 3-7 | 50-75 | 4.14 | 32 | 2.62 |
| C | 7-12 | 50-75 | 3.81 | 38 | 3.05 |
| D | 12-25 | Over 75 | 2.7 | 56 | 4.50 |

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